

## **REMARKS**

Applicants respectfully request reconsideration and allowance in view of the foregoing amendment and the following remarks. Applicants amend claims 1, 8, 24 and 29 without prejudice or disclaimer.

### **Response to Arguments**

Applicants thank the Examiner for detailing the Examiner's position. Applicants generally introduce this response by noting that amendments will be made to address and simplify the issues in prosecution in this case and to focus on limitations that are not taught or suggested in the art. Notably, Applicants will cancel the limitation discussed on page 3 of the Office Action to eliminate this as an issue as well as amending the specification to overcome the specification objections.

### **Objection to the Specification**

The Office Action objects to the amendment filed 6 August 2008 because it introduces new matter into the disclosure. Applicants in the amendments above cancelled the previous changes to the specification and submit that this addresses this issue.

### **Rejection of Claims 1, 4-5, 8-10, 24 and 27-31 Under 35 U.S.C. §112**

The Office Action rejects claims 1, 4-5, 8-10, 24 and 27-31 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Applicants have cancelled the reference to the matching score in the claims and submit that this addresses the Section 112 issues with respect to this limitation.

Applicants also amend the claims, for example claim 1, to recite modifying a speaker model associated with a known identify based on speech signals and the voicemail message associated with the received indicated identity. Applicants respectfully submit that this amendment has sufficient support in the specification. As noted on page 10 of the Office Action,

page 9, lines 10 and 11 discuss that speech signals in the message may be used to modify an existing model. Therefore, Applicants submit that this brings the claims into alignment with what is taught in the specification. Therefore, Applicants respectfully request withdrawal of this rejection.

**Rejection of Claims 1, 4-5, 9-10, 24, 27-28 and 30-31 Under 35 U.S.C. §103(a)**

The Office Action rejects claims 1, 4-5, 9-10, 24, 27-28 and 30-31 under 35 U.S.C. §103(a) as being unpatentable over Epstein et al. (U.S. Patent No. 6,327,343) (“Epstein et al.”) in view of Kanevsky et al. (U.S. Patent No. 6,219,407) (“Kanevsky et al.”) and further in view of Sundberg et al. (U.S. Patent No. 5,960,392) (“Sundberg et al.”). Applicants respectfully traverse this rejection and submit that the combination of references fails to teach each limitation of the claims. Applicants shall focus on several limitations in claim 1 that are not taught by the combination of art.

On pages 13 and 14 of the Office Action, the Office Action notes that Epstein et al. do not explicitly teach receiving an indicated entity of the unknown message caller from a voicemail subscriber and creating a storage folder for voicemail messages from the caller corresponding to the indicated received identity. The Office Action then states “however, this feature is well known in the art as evidenced by Kanevsky et al. who teaches (col. 5, lines 38-42, the subscriber enrolls the new caller, see also C.9.lines 29-35).” Applicants respectfully note that what is clearly missing from this quoted sentence is any analysis with regards to what Kanevsky et al. actually teaches. The Examiner’s characterization of the teachings is absent. Accordingly, Applicants respectfully request clarification of what the Examiner interprets Kanevsky et al. to teach and would either seek a Notice of Allowance based on the amendments and arguments set forth herein or a non-final Office Action which fills in the gaps on page 14 of the Office Action.

Applicants note that claim 1 is amended to recite receiving and storing one or more voicemail messages from the one or more callers and then, if the received indicated identity does not match any known entities, creating a new storage folder for voicemail messages from the caller corresponding to the received indicated identity. Applicants respectfully submit that when the broad teachings of Kanevsky et al. are properly analyzed, they do not teach creating a new storage folder for the voicemail messages and in fact the explicit teaching of the reference suggests not even storing voicemail messages. For example, column 3, line 59 - column 4, line 2 discusses the system of Figure 1. Applicants note that there is one location where messages are stored in module 103. Kanevsky et al. teach that the caller leaves a voicemail message which is stored in the phone message store 103. They explain that the store 103 may be an audio recorder for recording the audio message provided by the caller for future playback/verification. They then teach that no recording has to be done. "However, it is to be appreciated that the audio message does not necessarily have to be stored and, rather, it may be presented directly to the remainder of the system to be processed by the three modules: the speaker recognition module 104; the digit spotting module 105; and the message recognition module 106, as will be explained." See column 3, line 63 - column 4, line 2.

Accordingly, Applicants respectfully submit that at best Kanevsky et al. teach a single message store 103 and in fact suggest that no storage at all may take place. A similar suggestion is found with reference to the embodiment shown in Figure 3. Here, column 7, lines 56-67 teach the same approach in which the phone message store 303 is used but it is also suggested that the audio message does not have to be stored. With these teachings in mind, Applicants address column 5 and column 9 discussed in the Office Action. Column 5, lines 38-42 do not teach anything with regards to creating a new storage folder for voicemail messages. This is because there is only a single storage that is contemplated in phone message store 103. Lines 38-42

simply teach that the information associated with the voicemail user may indicate that it is a new speaker and what is stored is information such as the telephone number, address, voice models and so forth that are added to the system so that such speaker may be recognized in future calls such as would happen with the enrollment of a new caller. Applicants respectfully submit that therefore what is taught by Kanevsky et al. is not the creation of a new storage folder for voicemail messages from the caller corresponding to the received indicated identity, but rather the storage of “information about the new speaker”, that is “added to the new system so that such speaker may be recognized in future calls.” Without impermissible hindsight, Applicants submit that one of skill in the art would recognize that this teaching is limited to storing information about the speaker and not the voicemail. Applicants’ interpretation is supported by the numerous suggestions in the reference that it is not necessary to store any voicemail messages but that the caller’s information appears to be preferably be presented “directly to the remainder of the system to be processed by the three modules.” Therefore, Applicants submit that Kanevsky et al.’s teachings are limited to storing additional information about a new speaker such as telephone number, address and voice models so that the system can recognize the speaker in the future without teaching or suggesting this particular claim limitation.

Similarly, column 9, merely states the same thing again from column 5 but with reference to Figure 3 rather than Figure 1. Again, enrolling new callers simply involves providing information about new callers such as name, telephone number, address, voice models and so forth to the system for future speaker identification. Therefore, Applicants respectfully submit that with the minor amendments to claim 1, that there is clearly no creating of a new storage folder for voicemail messages from the caller corresponding to the received indicated identity.

Next, Applicants respectfully traverse that Sundberg et al. teach or suggest the limitation of modifying a speaker model associated with the known identity based on speech signals in the

voicemail message associated with the received indicated entity. Applicants submit when an objective view of the teachings of Sundberg et al. is considered, Applicants submit that this reference actually teaches away from such an approach.

The Office Action cites column 4, lines 30-44 as teaching the last limitation of claim 1. However, Applicants respectfully submit that the overall teachings of Sundberg et al. involve a process of developing speech verification systems. This process is generally shown in Figure 3 in which speech is received and different model units are used to verify the speaker. Column 3, line 36 explains that with speaker verification, the limiting factor is the amount of speech data that has to be collected from the user. They explain that when properly trained, complex speaker models requiring a large amount of collected speech data provide a better result than models requiring a small amount of speech data. However, if its complex speaker model is trained with a small amount of training data, the complex model may yield an inferior result compared to a simpler model trained with an equivalent amount of training speech data. Column 4, line 30 explains that as the system switches between simpler models to more complex models, this may be done over several generations so that more and more advanced model units requiring more and more speech data are continuously put into operation. They explain in line 33 that “in fact, completely new model units may be added to an existing model in order to add new features to the system. In this way, a speaker verification system may be upgraded without being taken out of operation.” Line 47 explains that “the simplest model unit can be trained from a speaker independent template. Thereafter the system changes operation modes by increasing complexity and performs in accordance with the invention as described above.” By moving from simpler models to more complex models, they explain in line 27 that eventually, the simpler units are taken out of service as the more complex model units achieve better performance.

Applicants respectfully submit that the substantive question is if a model already exists and there is a shift to more complex models, what type of data would be used to modify or replace the more complex advantageous models? They explain in lines 30-44, cited in the Office Action, that the more advanced model units require more and more speech data and are continuously put into operation. In other words, after the simple units are deployed and the available data grows, the system successively trains using the complex model units using more data. See column 4, lines 1-9.

Applicants respectfully submit that this differs from claim 1 in which an existing speaker model is modified based on speech signals from a single voicemail message associated with the received indicated identity. Applicants submit that one of skill in the art would understand that Sundberg et al. teach away from such an approach by noting that models implemented after existing models grow more complex and require more data. Therefore, when Kanevsky et al. teach in column 3, line 41 that if a complex speaker model is trained with a small amount of training speech data (which one of skill in the art would understand would like exist in a single voicemail message), the complex model may yield an inferior result compared to the simpler model trained with an equivalent amount of training speech data. In other words, Applicants submit that one of skill in the art, when faced with the knowledge of the teachings of Sundberg et al., would more likely assume that an existing speaker model as is taught in Sundberg et al., and with the desire to improve the verification system as more available data grows, would clearly want to use the teachings of Sundberg et al. to move to more complex speaker models and to replace simpler units with the more complex units. See column 4, lines 25-29. In so doing, one of skill in the art would necessarily require modeling such complex speaker models with a large amount of collected speech data to provide a better result. Column 3, lines 38-42. In this regard, Applicants respectfully submit that Sundberg et al. actually teach away from the present

invention by virtue of their express teachings of taking simpler units out of service and replacing them with more complex units trained on a large amount of speech data rather than the approach recited in claim 1, which involves modifying a speaker model associated with the known identity based on speech signals and the voice message associated with the received indicated identity. Sundberg et al., when its overall teaching and suggestive power is properly analyzed, teach away from such an approach. Accordingly, Applicants respectfully submit that claim 1 is patentable and in condition for allowance.

Claim 24 is amended in a similar manner to claim 1. Therefore, Applicants submit that claim 24 is patentable and in condition for allowance. Applicants also note that we do not concede that one of skill in the art would have sufficient motivation or suggestion to combine these references. Indeed, Applicants respectfully submit that given the missing articulation of what Kanevsky et al. teach on page 14, line 4, Applicants submit that a *prima facie* case of obviousness has not been established in this Office Action with respect to why one of skill in the art would combine Kanevsky et al. with Epstein et al. with the absence of the Examiner's interpretation of Kanevsky et al.'s teachings, Applicants have no data as to the basis for a *prima facie* case.

Therefore, Applicants submit that claim 1 and its dependent claims 4 and 5 are patentable and in condition for allowance.

Applicants note that claim 8 was not listed on page 11 as being rejected on the combination of these references but only dependent claims 9 and 10. However, Applicants have amended claim 8 in a similar manner to claim 1 and therefore submit that claim 8 and dependent claims 9 and 10 are patentable and in condition for allowance. Similarly, Applicants submit that independent claim 24 and dependent claims 27, 28, 30 and 31 are therefore patentable and in condition for allowance.

**Rejection of Claims 8 and 29 Under 35 U.S.C. §103(a)**

The Office Action rejects claims 8 and 29 under 35 U.S.C. §103(a) as being unpatentable over Epstein et al. in view of Kanevsky et al., and further in view of Murveit et al. (U.S. Patent No. 6,766,295) (“Murveit et al.”) and Sundberg et al.. Applicants submit that claims 8 and 29 are patentable and in condition for allowance. Applicants do not acquiesce that it would be obvious to combine these references.

Applicants submit that claim 29 is patentable inasmuch as it depends from claim 24 and recites further limitations therefrom.

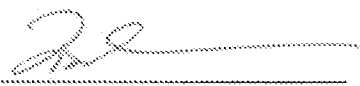


**CONCLUSION**

Having addressed all rejections and objections, Applicants respectfully submit that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited. If necessary, the Commissioner for Patents is authorized to charge or credit the **Novak, Druce & Quigg, LLP, Account No. 14-1437** for any deficiency or overpayment.

Respectfully submitted,

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